

A Variant *Aplysia californica*

LINDSAY R. WINKLER¹

ON JULY 6, 1960, while on a routine collecting trip to Lunada Bay, Palos Verdes, California, I collected an unusual 19.5-cm sea hare. This sea hare had all the characteristic features diagnostic of *Aplysia californica* Cooper. In addition, however, a row of fleshy hornlike tentacles extended from 1 cm behind the posterior tentacles on the middorsal surface for a distance of 1.5 cm, after which the continuation of this line was outlined by a row of bumps extending caudad to its interception with the genital groove between the anterior ends of the parapodia. The specimen was transported live to the laboratory where it was observed and photographed (Fig. 1).

On this specimen the posterior tentacle measured 2.5 cm. Beginning anteriorly, the first three supernumerary tentacles measured 9, 7, and 8 mm, followed by a branched tentacle with a total length of 8 mm, each branch of which measured 3 mm. The most posterior tentacle was short, measuring only 3 mm in length.

Careful search of the Lunada Bay area at the time and on successive trips to the area during the next two years, though resulting in the capture and examination of hundreds of specimens, failed to produce others possessing aberrant tentacular configurations.

It is felt that this specimen is probably the result of an accident of development, in which cells normally destined to become tentacles were moved caudad to develop into supernumeraries. Credence may be lent to this hypothesis by the elongated incurved cavities on the right-hand side of tentacles 1 and 3, which suggest the "rolled-tube" effect which is normally seen in the posterior tentacle of the sea hare. Wong (Chi) and Wagner (1956) demonstrated

morphological changes in snail tentacles after experimental irradiation with ultraviolet light. This may indicate a plasticity in snail tissues which, although not indicating any mechanism, could conceivably be remotely related to the present phenomenon.

It is not possible, however, to eliminate the possibility of the phenotypic appearance of a

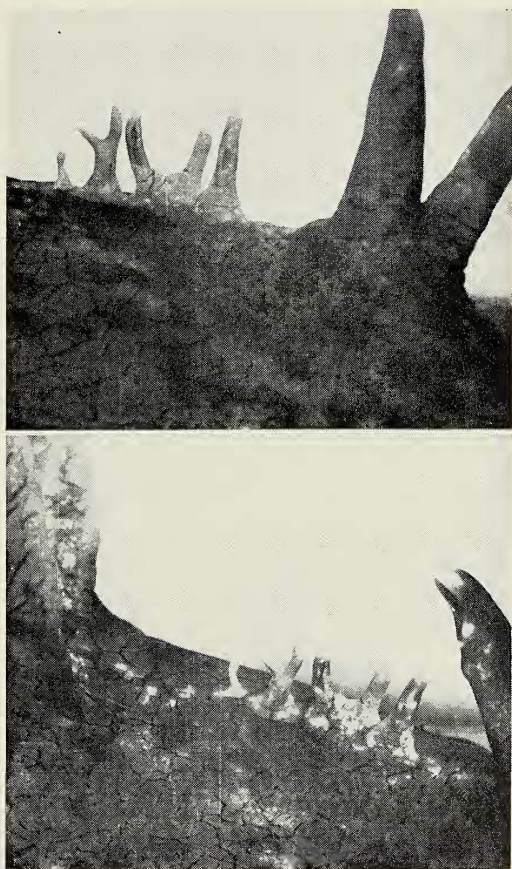


FIG. 1. Photographs of the tentacles of the abnormal specimen of *Aplysia californica*, taken while living. Note the fleshy platform supporting tentacles 2 and 3.

¹ College of the Desert, Palm Desert, California 92260. Manuscript received December 18, 1966.

genetic mutation, though this seems unlikely for other considerations as well as the suggestion of non-bilaterality in the incurved cavities on tentacles 1 and 3.

The possibility of this specimen representing a new species would seem very remote. At most it seems only to further accentuate the variability of this plastic genus.

REFERENCE

- WONG (CHI), LOIS W., and EDWARD D. WAGNER. 1956. Some effects of ultraviolet radiations on *Oncomelania nosophora* and *Oncomelania quadrasi*, snail intermediate hosts of *Schistosoma japonicum*. Trans. Am. Microscop. Soc. 75:204-210.